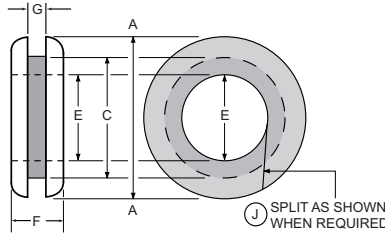


# Genuine Aircraft Hardware Co.

## MS35489

Grommets, Synthetic and Silicone Rubber, Hot - Oil and Coolant Resistant

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**Kits Available**

TABLE I. DASH NUMBERS AND DIMENSIONS

E HOLE	C GROOVE	A OUTSIDE	GROOVE WIDTH G									
			.062		.094		.125		.188		.250	
			DASH NO.	F	DASH NO.	F	DASH NO.	F	DASH NO.	F	DASH NO.	F
.125	.188	.312	140	.188								
.125	.250	.344	1	.188	142	.218						
.125	.375	.500			143	.312						
.125	.562	.750	2	.188			31	.250	60	.312	89	.375
.125	1.000	1.250	3	.250			32	.312	61	.375	90	.438
.188	.312	.438	4	.188	144	.250	33	.250	62	.312	91	.375
.188	.562	.750	134	.188	145	.468	137	.250	138	.312	139	.375
.188	.625	.875	5	.188			34	.250	63	.312	92	.375
.250	.438	.625			146	.219						
.250	.750	1.000	6	.188			35	.250	64	.312	93	.375
.250	1.000	1.250	7	.250			366	.312	65	.375	94	.438
.312	.562	.812	8	.250			37	.312	66	.375	95	.438
.312	.750	1.000	9	.312			38	.375	67	.438	96	.500
.312	.812	1.062	10	.312			39	.375	68	.438	97	.500
.375	.500	.641	118	.312			122	.375	136	.438	130	.500
.375	.656	.875			147	.250						
.375	.625	.875	141	.250								
.375	1.000	1.250	11	.312			40	.375	69	.438	98	.500
.438	.688	.938	12	.250	148	.281	41	.312	70	.375	99	.438
.500	.750	1.000	13	.312			42	.375	71	.438	100	.500
.500	.812	1.062	149	.250	150	.281						
.500	1.250	1.000					43	.375	72	.438	101	.500
.562	.812	1.062	14	.312			44	.312	73	.375	102	.438
.625	.875	1.125	15	.250			45	.375	74	.438	103	.500
.625	.969	1.250	16	.312	151	.344	46	.375	75	.438	104	.500
.625	1.250	1.500	17	.250	152	.438	47	.312	76	.375	105	.438
.688	1.000	1.312	18	.250			48	.438	77	.500	106	.562
.750	1.062	1.375	19	.375	153	.406	49	.438	78	.500	107	.562
.750	1.250	1.627	20	.375	154	.312	123	.312	127	.375	131	.438
.750	1.438	1.812	135	.250								
.750	1.625	2.000	21	.375			50	.438	79	.500	108	.562
.875	1.125	1.500	120	.375			124	.438	128	.500	132	.562
.875	1.250	1.625			155	.344						
.875	1.625	2.000	22	.438			51	.500	80	.562	109	.625
1.000	1.375	1.750	121	.438			125	.500	129	.562	133	.625
1.000	1.750	2.250	23	.438	156	.375	52	.500	81	.562	110	.625
1.000	1.875	2.250					53	.500	82	.562	111	.625
1.250	2.375	2.750	24	.438			54	.500	83	.562	112	.625
1.250	2.500	2.875	25	.438			55	.500	84	.562	113	.625
1.500	1.750	2.125	26	.438								
1.500	2.750	3.250	27	.438			56	.500	85	.562	114	.625
1.750	3.250	3.750	28	.438			57	.500	86	.562	115	.625
2.000	3.500	4.000	29	.500			58	.562	87	.625	116	.688
			30	.500			59	.562	88	.625	117	.688

NOTES: • PROCUREMENT SPECIFICATION: MIL-G-3036  
 • SUPERSEDES: MS35490 and AN931  
 • THIS INFORMATION FROM MILITARY STANDARD MS35489 PAGE 1 OF 3, REVISED FEB. 17, 1989, SOME DETAILS MAY HAVE BEEN OMITTED FOR CLARITY.

Continued...  
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## MS35489

### Grommets, Synthetic and Silicone Rubber, Hot - Oil and Coolant Resistant

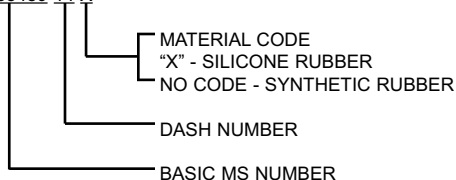
Continued...

#### REQUIREMENTS:

1. **MATERIAL:** RUBBER, SYNTHETIC, COMPOSITION A, IN ACCORDANCE WITH PROCUREMENT DOCUMENT, RUBBER, SILICONE, COMPOSITION B, IN ACCORDANCE WITH PROCUREMENT DOCUMENT.
2. **COLOR:** BLACK (COMPOSITION A). RED OR ORANGE (COMPOSITION B).
3. **PART NUMBER:** THE PART NUMBER SHALL CONSIST OF THE BASIC MS NUMBER FOLLOWED BY A DASH NUMBER FROM TABLE I, PLUS A MATERIAL CODE LETTER "X" FOR SILICONE RUBBER, NO CODE LETTER FOR SYNTHETIC RUBBER.

EXAMPLE:

MS35489-14 X



MS35489-14X INDICATES - GROMMET, SILICONE RUBBER, HOT-OIL AND COOLANT RESISTANT; GROOVE WIDTH .062; HOLE DIAMETER .500; GROOVE DIAMETER .812; OUTSIDE DIAMETER 1.062; THICKNESS .312.

4. **TOLERANCE:** TOLERANCES SHALL BE  $\pm .031$  INCH FOR THICKNESS (F) AND OUTSIDE DIAMETER ( $\varnothing A$ );  $\pm .016$  INCH FOR ALL OTHER DIMENSIONS.

#### NOTES:

1. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
2. SUPERSESSION: REPLACEMENT PART NUMBER RELATIONSHIPS SHALL BE IN ACCORDANCE WITH TABLE II. CANCELLED MS35490 GROMMETS MAY BE USED UNTIL EXISTING STOCKS ARE DEPLETED. DO NOT USE MS35490 GROMMETS TO REPLACE MS35489 OR AN931 GROMMETS. AN931 GROMMETS AND SUPERSEDING MS35489 GROMMETS ARE UNIVERSALLY, FUNCTIONALLY AND DIMENSIONALLY INTERCHANGEABLE.
3. IN THE EVENT OF A CONFLICT BETWEEN THE TEXT OF THIS STANDARD AND THE REFERENCES CITED HEREIN, THE TEXT OF THIS STANDARD SHALL TAKE PRECEDENCE.
4. REFERENCED GOVERNMENT (OR NON GOVERNMENT) DOCUMENTS OF THE ISSUE LISTED IN THAT ISSUE OF THE DEPARTMENT OF DEFENSE INDEX OF SPECIFICATIONS AND STANDARDS (DODISS) SPECIFIED IN THE SOLICITATION FORM A PART OF THIS STANDARD TO THE EXTENT SPECIFIED HEREIN.
5. GROMMETS PREVIOUSLY PROCURED WITH A SPLIT (SUFFIX "S") ARE NO LONGER PROCURED OR STOCKED BY SERVICES. FOR REPLACEMENT USE SOLID GROMMETS, AND SPLIT AT ASSEMBLY.

#### ADDITIONAL NOTES:

- PROCUREMENT SPECIFICATION: MIL-G-3036
- SUPERSEDES: MS35490 and AN931
- THIS INFORMATION FROM MILITARY STANDARD MS35489 PAGE 2 OF 3, REVISED FEBRUARY 17, 1989, SOME DETAILS MAY HAVE BEEN OMITTED FOR CLARITY.

## MS35489 Grommets, Synthetic and Silicone Rubber, Hot - Oil and Coolant Resistant

Continued...

TABLE II. REPLACEMENT PART NUMBERS

CANCELLED AN931		PART NUMBER		CANCELLED AN931		PART NUMBER		CANCELLED AN931		PART NUMBER	
		CANCELLED MS35490 1/	SUPERSEDED BY MS35489			CANCELLED MS35490 1/	SUPERSEDED BY MS35489			CANCELLED MS35490 1/	SUPERSEDED BY MS35489
2-9	1	A2-9	25	B2-9	48	C2-9	71	C2-9	89		
2-16	2	A2-16	26	B2-16	49	C2-16	72	C2-16	90		
3-5	3	A3-5	27	B3-5	50	C3-5	73	C3-5	91		
3-9	4	A3-9	28	B3-9	51	C3-9	74	C3-9	139		
3-10	5	A3-10	29	B3-10	52	C3-10		C3-10	92		
4-7	6	A4-7	30	B4-7	53	C4-7	75	C4-7	93		
4-12	7	A4-12	31	B4-12	54	C4-12	76	C4-12	94		
4-16	8	A4-16	32	B4-16	55	C4-16	77	C4-16	95		
5-9	9	A5-9	33	B5-9	56	C5-9	78	C5-9	96		
5-12	10	A5-12	34	B5-12	57	C5-12	79	C5-12	97		
5-13	118	A5-13	35	B5-13	58	C5-13	80	C5-13	130		
6-10	11	A6-10	36	B6-10	59	C6-10	81	C6-10	98		
6-16	12	A6-16	37	B6-16	60	C6-16	82	C6-16	99		
7-11	13	A7-11	38	B7-11	61	C7-11	83	C7-11	100		
8-13	14	A8-13	39	B8-13	62	C8-13	84	C8-13	101		
8-20	15	A8-20	40	B8-20	63	C8-20	85	C8-20	102		
9-13	16	A9-13	41	B9-13	64	C9-13	86	C9-13	103		
10-14	17	A10-14	42	B10-14	65	C10-14	87	C10-14	104		
10-20	18	A10-20	43	B10-20	66	C10-20	88	C10-20	105		
11-16	19	A11-16	44	B11-16	67	C11-16	89	C11-16	106		
12-17	20	A12-17	45	B12-17	68	C12-17	90	C12-17	107		
12-20	135	A12-20	46	B12-20	69	C12-20	91	C12-20	131		
12-23	21	A12-23	47	B12-23	70	C12-23	92	C12-23	108		
12-26	120	A12-26	48	B12-26	71	C12-26	93	C12-26	132		
14-20	22	A14-20	49	B14-20	72	C14-20	94	C14-20	109		
14-26	121	A14-26	50	B14-26	73	C14-26	95	C14-26	133		
16-22	23	A16-22	51	B16-22	74	C16-22	96	C16-22	110		
16-30	24	A16-30	52	B16-30	75	C16-30	97	C16-30	111		
20-38	25	A20-38	53	B20-38	76	C20-38	98	C20-38	112		
20-40	26	A20-40	54	B20-40	77	C20-40	99	C20-40	113		
24-28	27	A24-28	55	B24-28	78	C24-28	100	C24-28	114		
24-44	28	A24-44	56	B24-44	79	C24-44	101	C24-44	115		
28-52	29	A28-52	57	B28-52	80	C28-52	102	C28-52	116		
32-56	30	A32-56	58	B32-56	81	C32-56	103	C32-56	117		
			59	B32-56	82						

\* MS35489 SOLID GROMMETS SHOULD BE SPLIT AT ASSEMBLY WHEN NECESSARY FOR REPLACEMENT OF MS35490 SPLIT GROMMETS.

**NOTES:**

- PROCUREMENT SPECIFICATION: MIL-G-3036
- SUPERSEDES: MS35490 and AN931
- THIS INFORMATION FROM MILITARY STANDARD MS35489 PAGE 3 OF 3, REVISED FEBRUARY 17, 1969, SOME DETAILS MAY HAVE BEEN OMITTED FOR CLARITY.